

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

General Electric Areospace

Mississippi Technology Alliance

General Electric - Aviation Boosts Savings With Simulation Modeling and Analysis

Client Profile:

General Electric (GE) - Aviation is the world's leading producer of turbine engines for commercial and military aircraft. GE also supplies aircraft-derived engines for marine applications and provides aviation support services. The company employs 110 people at its facility in Batesville, Mississippi.

Situation:

GE - Aviation built a new facility in Batesville, MS in 2008. In addition to designing a lean and efficient line, GE needed to determine the personnel required to meet their forecasted demand and assess what impact changes in that demand could have on their production and personnel requirements. The company contacted the Mississippi Technology Alliance (MEP.ms), a NIST MEP network affiliate, for help.

Solution:

An MEP.MS team from Mississippi State University (MSU), composed of engineers from the Center for Advanced Vehicular Systems (CAVS) Extension and the Department of Industrial and Systems Engineering, provided operations analysis support through the development and application of discrete-event simulation models before the plant construction was completed. These simulation models were used to analyze and 'optimize' plant layout and performance by identifying and eliminating bottlenecks, improving the overall efficiency of the production line, evaluating the line's sensitivity to product mix changes, and evaluating product ramp-up scenarios. In addition, five GE engineers were trained on the basics of simulation modeling and analysis using Flexsim simulation software.

Results:

* Achieved over \$400,000 in cost savings.

Testimonial:

"Flexsim is a powerful tool that impacted our decisions in regards to capacity, inventory, manpower and equipment. The Flexsim simulation gave us a chance to see how the line would perform and react to various situations. This allowed us to make better decisions and make improvements that would not have been possible until years later without the model created with the MSU team."

Antoine Townes, Product Owner - Fan Platforms